R-10								COMPAR	NG IRRIG	ATION SY	STEMS					
		<u>Surface</u>					<u>Sprinkler</u>						<u>Micro</u>			
SYSTEM SUB	3-TYPE	Flood, Uncontrolled	Furrow, Graded	Furrow, Contour	Border, Graded	Border, Level Basin	Big Gun	Side Roll	Solid Set	Over Pipe, Impact	CenterPivot, L Low Pressure Drops	inear LEPA	Mini-Sprinkler	Continuous tape	Point Source Emitter	Subsurface Drip Irrigation (SDI)
Descripti	ion	Water is diverted into a field with no method to contain the water in any part of the field.	Small channels on a continuous somewhat uniform slope in the direction of irrigation.	level furrows carry water	A form of controlled surface flooding, where the field is divided by parallel ridges on a slope in the direction of irrigation.	A form of controlled surface flooding on land that is leveled flat or nearly flat and the water is confined by borders all around. Most of these have been laser leveled.	A high capacity sprinkler mounted on a self-powered chassis and fed with water from a flexible hose	Similar to a hand move system with the lateral lines mounted on a large wheel. The system is periodically moved typically by a small gas engine	A fixed sprinkler system that covers the entire field	The "classic" original center pivot system.	A short pipe connected to the supply line that positions the outlet at a pre-determined elevation above or within the crop canopy or to a drag hose on the ground. See LEPA, LESA, LPIC, & MESA	Low Energy Precision Application. Discharge is via a drag sock or hose or through a bubble shield or pad nozzle less than or equal to 18" above ground. Only used in a row crop or bed scenario where water is applied only within the row.	Spray or spinners, generally less than 45 gallons per hour (0.75 gpm)	"Classic" Drip Irrigation with either a tortuous path or holes burned or cut into the tubing.	Individual emitters inserted or tapped into tubing (generally less thar or equal to 2 gph) or bubblers (generally less thar or equal to 60 gph)	the soil surface rather than laid on the surface or
Potential Irri Efficiency	_	45	70	70	70	80	55	65	75	70	80	90	85	90	90	90
Applicab	ilitv	Not recommended	Sloping terrain such as in Tucumcari and	Uneven sloping terrain such as mountainous valleys throughout the state.	Sloping terrain such as the mountainous valleys throughout the state.	Used widely in flatter terrain such as in Las Cruces, Carlsbad, and Fort Sumner	Relatively flat terrain. Often used to apply liquid ag waste.	Various terrain	Various	Various terrain	Various terrain	Relatively flat terrain	Various terrain	Relatively flat terrain	Various terrain	Relatively flat terrain
Crops		Pasture	All Row Crops	All Row Crops	Pasture and Hay	Pasture and Hay	Pasture and Hay	Pasture, Hay, and Low Growing Row Crops	Pasture, Hay, and Most Row Crops	Pasture, Hay, and Most Row Crops	Pasture, Hay, and Most Row Crops	All Row Crops	All Row Crops and orchards	All Row Crops	All Row Crops, Orchards, and Vineyards	All Row Crops, d Alfalfa, and orchards
Head or Pre	essure	Very Low	Very Low	Very Low	Very Low	Very Low	60+ PSI	50 PSI	50 PSI	50 PSI	30 PSI	30 PSI	30 PSI	25 PSI	25 PSI	25 PSI
Operation	on	Very High labor requirement	High labor requirement	High labor requirement	High labor requirement	Medium labor requirement	High labor requirement	High labor requirement	Low labor requirement, but must be highly skilled	Low labor requirement, but must be highly skilled	Low labor requirement, but must be highly skilled	Low labor requirement, but must be highly skilled	Low labor requirement, but must be highly skilled	Low labor requirement, but must be highly skilled	•	Low labor requirement, but must be highly skilled
Maintena	ınce	Annual touchup of ditches, turnouts, and borders.					Electrical and mechanical requirements						Electrical and mechanical requirements			
Restriction	ons	Need large "head" of water.				Water quality is very important due to the potential for leaf burn.						Filtration is essential.				
										ntinuous supp					ous supply of w	
System C Other Considera	-	Minimal Low Low Low Medium The minimum application under the very best designed and operated surface systems is about two inches					High High Very High Very High Very High Very high Higher energy cost than other sprinkler energy cost when systems Additional energy cost when compared to surface methods.						Very High Very High Very High Very High Additional energy cost when compared to surface methods.			
		Production may be substantially reduced due to moisture stress.					Production may be slightly reduced due to moisture stress.						Production can be optimized due to operation flexibility			
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